Government of Western Australia
Department of Water and Environmental Regulation

Amendment Notice 2

Licence Number	L5206/1987/10
Licence Holder	Matilda Operations Pty Ltd
ACN	166 954 525
File Number:	2012/006906
Premises	Wiluna Mine Site WILUNA WA 6646 Mining tenements M53/30, M53/32, M53/468, L53/62, L53/20, and part tenements M53/40, M53/44, M53/50, M53/26, M53/6, M53/95, M53/96, M53/200 and M53/69
Date of Amendment	24 May 2018

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Date signed: 24 May 2018

Tim Gentle

Manager Licensing (Resource Industries)

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Definitions and interpretation

Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
Amendment Notice	refers to this document
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Matilda Holdings Pty Ltd
mbgl	Meters below ground level
mg/L	Milligrams per litre
Mtpa	Millions of tonnes per annum
Premises	refers to the premises to which this Amendment Notice applies, as specified at the front of this Amendment Notice.
RL	Relative level. In the case of the current application is meters above sea level.

Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

The following guidance statements have informed the decision made on this amendment

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

Amendment description

On 12 December 2017, the Licence Holder submitted an application to amend Licence L5206/1987/10 for the Matilda Operations which forms part of the Wiluna Operation. Appendix 1 contains a list of the documents that form the application.

This notice is limited to an amendment for Category 5: processing and beneficiation of metallic and non- metallic ore. No changes to Category 6 mine dewatering, or category 85 sewage facility has been requested. The Licence Holder has applied to make the following changes:

1. Construction of the stage 2 lift for Tailings Storage Facility(TSF) J
2. Increase the production throughput of ore processed to 1.95Mtpa
3. Amendment to Licence Condition 3.4.3
4. Change of premises name from Wiluna Operation to the Wiluna Mine Site.

Construction of TSF J stage 2

Through this amendment, the Licence Holder intends to construct the stage 2 TSF J raise by 5m from 506.5mRL to 511.5mRL which will allow for the storage of 1.95Mtpa of tailings. TSF J is single celled and of an irregular hexagonal shape, and it adjoins the existing TSF H along the southern boundary. The works include raising of the central decant structure tower, underdrainage tower, causeway, embankments, piezometers, delivery and return water pipes and electrical equipment such as pumps. The construction details of the stage 2 embankment are provided in Appendix 3 of this Amendment Notice.

Increase in throughput

Following a licence amendment that was granted in June 2016 (see Table 4), upgrades to processing plant equipment were undertaken at the premises which enabled an increase in the production capacity up to 1.8Mtpa. Since this upgrade further efficiencies have been gained through efforts to reduce bottlenecking in the plant operations (largely through replacement of pumps). This has increased the overall operating time and has allowed for an increase in the throughput capacity of ore processed at the site from 1.8Mtpa to 1.95Mtpa. The Licence Holder is seeking to have this processing capacity reflected in the approved throughput for the Licence.

Amendment to ecological monitoring requirements for Lake Way

The Licence Holder has requested that bi-annual monitoring of the ecological impacts

associated with the discharge of mine dewater discharge into Lake Way, including diversity, abundance and function of benthic microalgae and aquatic invertebrate species and riparian vegetation be limited to annual monitoring and only upon commencement of discharge into Lake Way.

Change to premises name

There are six mining sites within close proximity of the town site of Wiluna: Wiluna, Matilda, Caledonia, Williamson, Regent and Galaxy mine sites. These operations are collectively known as the Matilda Gold Project and the parent company that owns these is Blackham Resources Pty Ltd. These mining operations are owned by two subsidiary companies: Matilda Operations Pty Ltd, which owns the Wiluna Operation and Caledonian Mine, and Kimba Resources Pty Ltd, which owns the Matilda, Williamson, Regent and Galaxy mine sites. This Licence applies to the Wiluna Operation. The Company has requested this mine site name be amended from Matilda Operation to the Wiluna Mine Site.

Amendment history

Table 3 provides the amendment history for L5206/1987/10.

Table3: Licence amendments

Instrument	Issued	Amendment
L5206/1987/10	28/08/2014	Licence amendment to update improvement Program and transfer of occupier to Matilda Operations Pty Ltd
L5206/1987/10	10/06/2016	Licence amendment to authorise the construction of TSF Cell J and update the associated groundwater monitoring network. Increase to Category 5 production throughput to 1,800,000 tonnes per annum and to authorise tyre disposal by burial at Essex Pit. Finalised improvement program conditions removed and new improvement conditions for dust management, ecological assessment of dewatering impacts and checking of sampling ports for off-gas stacks were included.
L5206/1987/10	22/09/2016	Amendment Notice 1 Amendment to extend the submission date for improvement
L5206/1987/10	24/05/2018	Amendment Notice 2 Licence amendment to construct the stage 2 lift for Tailings Storage Facility (TSF) J, to increase the production throughput of ore processed from 1.8Mtpa to 1.95Mtpa, update Improvement Program and to extend the Licence to 21 November 2019.

Residential and sensitive areas

Table 4 below lists the relevant sensitive residential receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 4: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from TSF J
Bondini Community	3.3km North East
Wiluna Townsite	3.5km North

Specified ecosystems

Table 5 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 5: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from TSF J
• Lake Way • Lake Violet	9km South South-East 1km South East
Priority Ecological Community • Stygofauna assemblages associated with lake Violet Calcrete system	Buffer Zone 2.2km South

Threatened fauna • Two confirmed recordings of mammals • Twelve recordings of migratory bird species protected under international agreement	 5km North 5km North

Groundwater and water sources

Groundwater at the premises is hypersaline and is contaminated from mining activities. The nearest wetland is Lake Violet 1km south of TSF J as indicated in Table 6.

Table 6: Groundwater and water sources

Groundwater and water sources	Distance from TSFJ	Environmental value
Significant stream	3.35km south west	The significant stream is intermittent and would only flow following periods of intense rainfall towards the salt lake systems.
Groundwater Area *Rights in Water and Irrigation Act 1914* • East Murchison Groundwater Area	Originally groundwater was encountered between 10mbgl in the mining area to 2mbgl close to lake Violet. However due to the extended history of mining in the area and dewatering groundwater on the site is about 20 mbgl	Groundwater is hypersaline ranging from 36,800mg/L to 200,000mg/L at the construction site. Natural groundwater flow in the mining area is southwards towards Lake Way, however alteration of natural groundwater levels due to extensive dewatering has caused the localized groundwater to flow towards the east and north pits. Due to mounding beneath the TSFJ, some groundwater within this area is likely to flow in a southerly direction.The deeper groundwater at Wiluna is naturally high in arsenic. Groundwater quality deteriorated due to poor historical mining practices has also occurred.

Risk assessment

Tables 7 and 8 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

Table 7: Risk assessment for proposed amendments during construction

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**				
Cat 5 Processing or beneficiation of metallic or non-metallic ore	Earthworks including excavation, treatment, transport and compaction of materials for the embankment raise, internal causeway	**Dust**: from construction activities	Relatively undisturbed native vegetation 1.3km south	**Air**: transport and dispersion of particles (fugitive dust)	Deposition on vegetation which may impact on photosyn-thesis and plant respiration	Slight	Rare	Low	The separation distance between TSF J and the receptor is sufficient. Construction works will be of short duration. No further assessment required
		Storm water runoff : sediments containing metal and metalloids	Lake Violet 1km south of TSF J	**Land:** surface runoff	Increased sedimentation in Lake Violet. Potential for sediment to exceed the ecological criteria and harm to the lake ecosystem.	Minor	Rare	Low	The sediment discharge will be mitigated by existing drains and culverts redirecting surface water flow away from TSFJ during construction. Construction will be of short duration. No further assessment required

Table 8: Risk assessment for proposed amendments during operation

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**				
Cat 5 Processing or beneficiation of metallic or non-metallic ore	Dust lift off from tailings surface	**Dust**: emissions from surface of TSF containing tailings contaminants (see below)	Relatively undisturbed native vegetation 1.3km south	**Air**: transport and dispersion of particles (fugitive dust)	Adverse impacts to the health and survival of remnant vegetation	Slight	Rare	Low	There will be no overall change in the risk of dust emissions associated with the TSFJ embankment raise during operation. The separation distance between the TSFJ and the potential receptors is sufficient.
	HDPE pipeline, drain and pump failures associated with the transport of tailings slurry and decant water	**Decant/slurry water:** solution high in cyanide and salts, including metals/metalloids particularly As, Sb and Se. Other elements like Ag, Cd, Mn Co, Cu, Ni, Pb and Tl, may also be present.	Soil and groundwater	**Land**: direct infiltration through soil profile **Groundwater**: infiltration through soil to groundwater	Soil and groundwater contamination.	Moderate	Possible	Medium	There will be no overall change in the risk of pipeline, drain and pump failures associated with the TSFJ embankment raise. Existing Licence Condition 1.2.5 apply and require pipelines and pumps to be fitted with telemetry and pressure sensors, automatic cut off systems and secondary containment. Existing Licence condition 1.2.6 requires daily inspection of all delivery and return water infrastructure. No further assessment required.

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**				
Cat 5 Processing or beneficiation of metallic or non-metallic ore	Seepage of contaminants through the base of the TSF causing ground water contamination and mounding	**Slurry water:** high in contaminants particularly As, Sb and Se. Other elements like Ag, Cd, Mn, Co, Cu, Ni, Pb and Tl, may also be present.	Soil and groundwater	**Land**: direct infiltration through soil profile **Groundwater**: infiltration through soil to groundwater	Soil and groundwater contamination Rise in groundwater levels causing harm to vegetation and a decline of water quality flowing toward the nearby Lake Violet.	N/A	N/A	N/A	The TSF J embankment raise is unlikely to lead to increased seepage. The original seepage modeling included the total height of the TSF including the second lift. No further assessment required.
	Overtopping due to excess loading or heavy rainfall events or both	**Tailings slurry:** basic solution high cyanide and salt including, metals and metalloids particularly As, Sb and Se. Other elements like Ag, Cd, Co, Cu, Ni, Pb and Tl, may also be present	Soil and groundwater	**Land**: direct infiltration through soil profile **Groundwater**: infiltration through soil to groundwater	Soil and groundwater contamination.	N/A	N/A	N/A	There will be no overall change in the risk of overtopping associated with the TSF J embankment raise. Existing Licence Condition 1.2.3 applies and requires a minimum embankment freeboard of 300mm or a 1 in 100 year/72 hour storm event be maintained (whichever is greater). Existing condition 1.2.6 requires daily inspection of the freeboard embankment. No further assessment required.

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**				
Cat 5 Processing or beneficiation of metallic or non-metallic ore	Stormwater contact with external embankments and area surrounding TSF	**Dilute contaminated water:** containing metals and metalloids	Soil and groundwater	**Land**: direct infiltration through soil profile **Groundwater**: infiltration through soil to groundwater	Soil contamination. Groundwater contamination	N/A	N/A	N/A	There will be no overall change in the risk of storm water runoff being contaminated via contact with external embankments. Toe and diversion drains capture and direct this water for recycling. No further assessment required
	Contact by wildlife	**Contact:** wildlife exposed to toxic materials in TSF decant pond	Birds and bats	**Animal:** direct contact and ingestion of water with elevated metals	Harm to wildlife	N/A	N/A	N/A	Decant water is hypersaline and therefore not attractive to birds or bats

Risk of seepage causing groundwater mounding and contamination

A study was carried out to evaluate seepage through the embankment and foundation of the TSF under normal operating conditions. The seepage analysis results were used to estimate the total seepage losses from the proposed TSF J. The groundwater underlying the project area is typically saline to hypersaline and currently flows towards Lake Violet. The groundwater table is currently located at approximately 20 m below ground level at the location of TSF J. A transient seepage analysis under expected operating conditions suggests that during the period of operation of TSF J the groundwater table may increase to within 5 m of ground surface below the footprint of the decant pond, and to approximately 10 m below ground level at the external embankment. (Knight Piesold Consulting, 2017). Seepage discharged through the base of TSFJ has the potential to further impact on ambient groundwater quality as contaminated water infiltrates through the soil profile to groundwater.

Soils underlying TSFJ

TSFJ lies on an area where there is a buried paleodrainage channel which is locally exposed at Lake Violet. Bedrock in the area consists of deeply weathered volcanic rock which carries a series of fault lines (strike slips and shears) along which mineralization occurs. The weathered saprolite occurs at an approximate range of between 20-120mbgl across the site and contains very little groundwater. Seepage rates on test pits within this layer are extremely low and the rate of groundwater movement was calculated at between 0.09m per annum to 0.12m per annum during a study undertaken in 2008 (KH Morgan & Associates, 2009). This suggests that the greatest movement of water within the soil profile will occur within the paleo river sediments nearer the surface where water quality is hypersaline and in the order of 285,000 mg/L total dissolved solids.

The permeability of soils at the base of TSF J is estimated to be 1×10^{-6}m/s (Knight Piesold Consulting, 2016). TSF J is not lined and the underdrainage network only covers part of the base of the facility.

Seepage pathway

Seepage has been estimated as part of the design for TSFJ at the final embankment raise level of 515.5mAHD. A conservative approach has estimated 112-132kL/day as the total amount of seepage through the base of the TSF over the 40Ha facility. Due to the unlined nature of the TSF and the potentially shallow groundwater south of the facility, any discharge through the base has a high likelihood of entering groundwater where it will cause localised mounding (Knight Piesold Consulting, 2017).

Chemical characteristics of seepage

Seepage contains cyanide and a range of potentially contaminating metals and metalloids that have the ability to impact on environmental receptors. Of greatest concern are elevated levels of arsenic, antimony and selenium. Seepage also contains lower levels of silver, cadmium, chloride, sulphate, copper, lead, nickel and thallium which may also cause contamination.

Groundwater beneath TSFJ

The conceptual groundwater model used for this application is not up to date. An improvement condition included in this amendment, requires the Licence Holder to submit an updated conceptual groundwater model for the site not later than 3 months after the date of issue of the amendment.

Managing seepage

There are a number of design features that will aid the management of seepage from the TSF J embankment raise:

- The *in-situ* soils on which the foundation of the TSF J is built have a naturally low permeability which will reduce the flow of seepage through the base into the underlying soils;
- an underdrainage system beneath part of the base of the TSF which consists of a network of slotted pipes for collection and recovery of seepage;
- the decant pond will be managed and maintained to be as small as practically possible;
- seepage collected in underdrainage pipes is conveyed to a dedicated sump where the supernatant is pumped to the decant tower where it is then conveyed to the decant return water pond;
- perimeter embankments have a cut off trench to limit the horizontal movement of groundwater beneath the embankments;
- piezometers will be reinstated within the embankments at the same three locations to measure to phreatic surface within the deposition mass;
- Perimeter embankments have a toe drain to capture any near surface or embankment seepage and to control the phreatic surface; and
- The site has a TSF J Operating manual to ensure management of the daily operational practices align with the long term environmental and engineering objectives for this facility (Knight Piesold Consulting, 2016b)

Decision

The Delegated Officer notes that should not be any increased risk from the proposed lift beyond that which has previously been assessed.

During construction there is the potential for a number of characteristics of TSF J to vary from the design specifications, therefore the overall performance of the TSF J embankment raise could vary depending on the scale and nature of the variations. Consequently requirements have been added to the Licence to ensure the construction of the TSF J embankment raise to 511.5mRL is in accordance with the standards specified in the Licence amendment application. Table 1.2.4 of Condition 1.2.7 has been amended accordingly.

In setting regulatory controls for this aspect of environment risk, the Delegated Officer notes that relevant existing licence conditions are in place.

- The existing Licence condition 1.2.3 will ensure a minimal operational freeboard of 300mm is maintained at all times. Condition 1.2.6 requires daily inspection of this freeboard while the TSF is active.
- Existing Condition 1.2.6 requires daily inspection of the decant pond while TSF J is operational.
- Existing condition1.2.8 requires a monthly water balance to be undertaken. This condition requires the Licence Holder to consider the fate of site rainfall, evaporation, decant water recovery volumes, seepage recovery volumes, volumes of tailings deposited to derive and estimate of seepage lost.

The Licence Holder has failed to provide monthly water balance figures during the 2017 annual reporting period. For that reason, and to allow for a higher degree of accuracy of

annual water balance calculations to be realized, further conditions requiring a flowmeter to be installed, maintained and calibrated on the underdrainage system have been included (condition 1.2.9 – 1.2.12).

Alteration of ecological monitoring requirements

The Licence Holder applied to DWER to remove the requirement to undertake an annual environmental impact assessment of the impacts associated with mine dewatering on Lake Way as the company was not undertaking mine dewatering at the time to application was made. In a recent meeting with DWER (17 April 2018), Matilda Operations Pty Ltd staff indicated the company intends on commencing dewatering discharge to Lake Way in November 2018. On this basis the Delegated Officer has considered the request to remove this condition as no longer relevant.

Improvement Conditions

Licence Holder is required to submit an updated groundwater conceptual model for the site.

Amendment to expire date

The Licence expiring date has been extended to 21 November 2019.

Amendment to premises name

The Licence Holder applied to DWER to amend the premises name from Wiluna Operation to the Wiluna Mine Site. This change has been made.

Licence Holder's comments

The Licence Holder was provided with a draft Amendment Notice on **22 May 2018**. The Licence Holder responded on 24 May 2018 waiving the remaining comment period. No comments were submitted on the draft Amendment Notice.

Amendment

1. Premises address is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:
   ~~Wiluna Operation~~ Wiluna Mine Site
2. Expiry date is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:
   ~~21 November 2018~~ 21 November 2019
3. Condition 1.2.7 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

1.2.7 The Licensee shall construct the stage 2 TSF Cell J embankment raise to 511.5mRL, ~~processing plant upgrade and ancillary infrastructure~~ in accordance with the documentation detailed in Table 1.2.4:

Table 1.2.4: Construction Requirements[1]

Document	Parts	Date of Document
Blackham Resources Matilda Gold Project L5206/1987/10 Licence Amendment Supporting Document (including appendices)	All	~~February 2016~~ December 2017
~~Knight Piesold Memorandum PE16-00323 to Blackham Resources Ltd Re: Additional Information TSF J Application~~	~~All~~	~~12 April 2016~~
Knight Piesold Matilda Gold Project Tailings Storage Facility 'J" – Drawing - Stage 1 embankment sections and details – sheet 4	All	09 November 2016
Knight Piesold Matilda Gold Project Tailings Storage Facility 'J" – Drawing - Stage 1 – Underdrainage system layout	All	09 November 2016
Knight Piesold Matilda Gold Project Tailings Storage Facility 'J" – Drawing - General arrangement – final stage	All	12 December 2016
Knight Piesold Matilda Gold Project Tailings Storage Facility 'J" – Drawing - Stage 2 raise options – Sections A and G	All	21 December 2017
Knight Piesold Matilda Gold Project Tailings Storage Facility 'J" Final Design Rev.0 G.1 Seepage Assessment	All	21 December 2017
Knight Piesold – Civil Works Matilda Gold Project TSF J Stage 2 Construction (Rev A)	All	16 November 2017

Note 1: Where the details and commitments of the documents listed in condition 1.2.7 are inconsistent with any other condition of this Licence, the conditions of this Licence shall prevail.

4. The Licence is amended by the insertion of the insertion of the red text shown in underline below:

1.2.9 The Licence Holder shall install and operate a flow metering device to the underdrainage system outflow pipe to record the volumes of seepage recovered.

1.2.10 The Licence Holder undertake the monitoring in Table 1.2.5 according to the specifications in that table.

Table 3.6.1: Monitoring of inputs and outputs					
Input/Output	Monitoring point reference	Parameter	Units	Averaging period	Frequency
Underdrainage - outflow pipe	Flow meter (M1)	Volumetric flow rate (cumulative)	L/day	Monthly	Continuous

1.2.12 The Licence Holder shall submit the data collected through condition 1.2.11 as part of the monthly water balance calculations required by condition 1.2.8

5. Condition 4.1.1 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

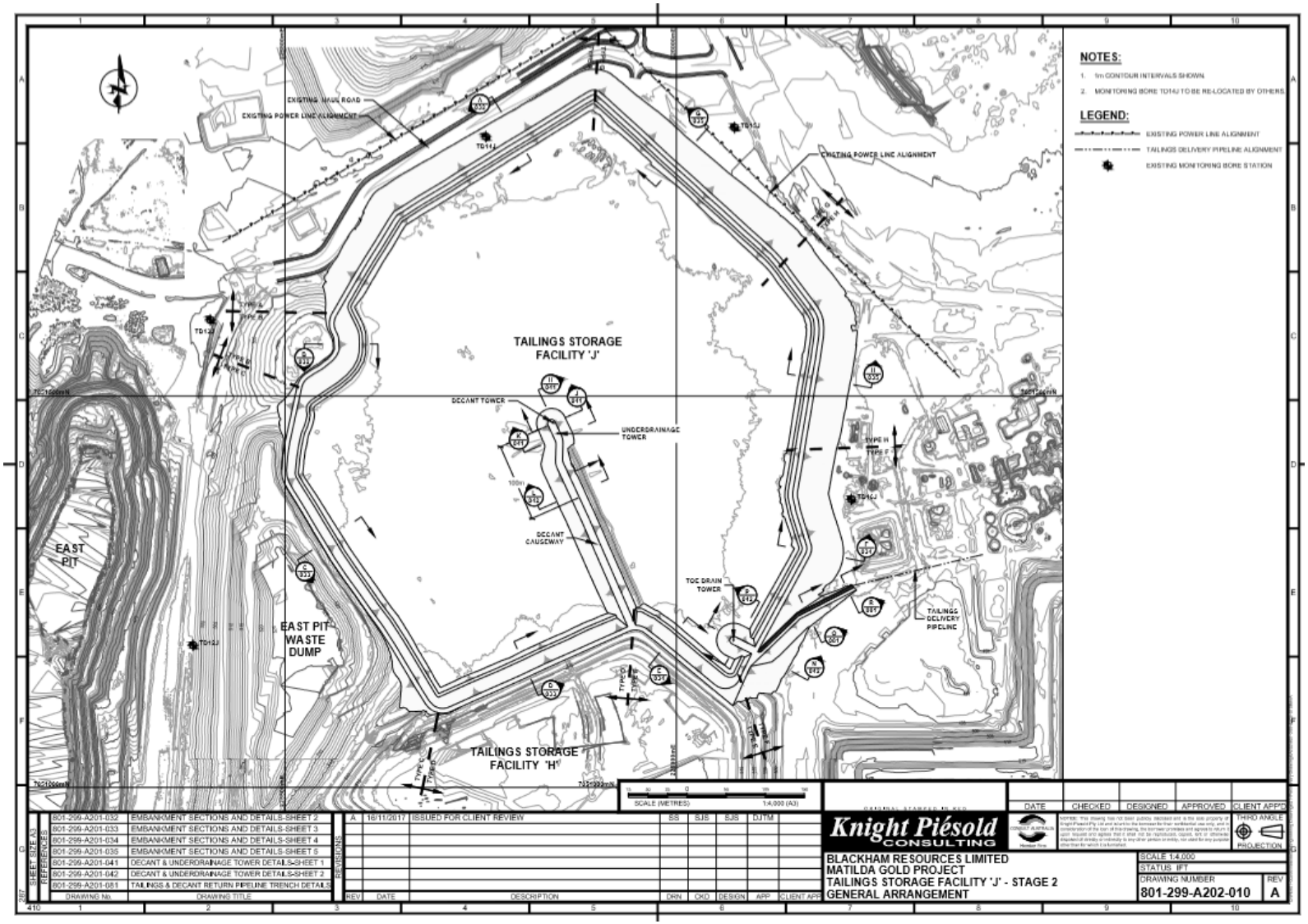
4.1.1 The Licensee shall complete the improvements in Table 4.1.1 by the date of completion in Table 4.1.1.

Table 4.1.1: Improvement program		
Improvement reference	**Improvement**	**Date of completion**
IR1	~~The Licensee shall submit to the CEO and implement a dust management plan for the site, addressing:~~ ~~• Identification of dust sources (including unrehabilitated TSFs, open disturbed areas, stockpiles) and distance to receptors;~~ ~~• Seasonal average wind rose data and wind speeds for the site;~~ ~~• Proactive management measures to manage dust;~~ ~~• Reactive management measures (in response to adverse weather conditions or field observations);~~ ~~• Licensee's roles and responsibilities for dust management; and~~ ~~• Process for managing dust complaints and incident investigation.~~ The Licensee shall submit to the CEO a conceptual groundwater model for the Premises to: • reflect current operations; • identify contaminants of concern; • identify the presence of preferential flow paths in the bedrock aquifer that will allow groundwater flow to bypass the pits; and • determine whether mine pit(s) at the site behave as terminal groundwater sinks or otherwise.	3 months from amendment date
~~IR2~~	~~The Licensee shall submit to the CEO a monitoring plan to conduct an annual assessment of the ecological impacts associated with the mine dewater discharge to Lake Way. The plan shall assess diversity, abundance and function of benthic microalgae and aquatic invertebrate species at control and impacted sites at Lake Way. The biannual monitoring plan shall also include an assessment of any impacts to riparian vegetation from the dewater discharge.~~	~~3 months from amendment date~~
~~IR3~~	~~The Licensee shall report to the CEO whether sampling ports are installed on the emission points to air listed in Table 2.2.1 and if so, whether these are compliant with AS 4323.1~~.	~~3 months from amendment date~~

Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L5206/1987/10 – Matilda Operations Pty Ltd	L5206/1987/10	accessed at www.dwer.wa.gov.au
2	Matilda Operations Pty Ltd Wiluna Gold Mine: 2017 Annual Environmental Report L5206/1987/10.	Blackham Resources, 2017	DWER record: A1628010
3	Email correspondence : TSF J raise 2	Blackham, 2018	DWER records A1657569 and A1657571
	Matilda Operations Pty Ltd - 2017 Dewatering Discharge Report	Dewatering Discharge Report, 2017	DWER records A1628013
4	Hydrogeological assessment impact for positioning of new in-pit tailings facility monitoring bores: Apex Gold Pty Ltd	KH Morgan & Associates, 2009	DWER record A1097321
5	Document submitted as part of Mining proposal Registration ID 58624 Wliuna Gold Mine Project – Relocation of calcine Tailings – Update (and attachments)	Knight Piesold Consulting, 2016	DWER record A1448659
6	Blackham Resources Limited Matilda Gold Project Tailings Management Feasibility Study, prepared for Blackham Resources Limited, February 2016	Knight Piesold Consulting 2016a	DWER record A1068541
7	Blackham Resources Limited, Matilda Gold Project: Tailings Storage Facility Operating Manual	Knight Piesold Consulting 2016b	DWER record A1381322
8	TSF Seepage Assessment – Section G1 - Knight Piesold Consulting	Knight Piesold Consulting 2017	DWER record A1635160
9	Email correspondence: Embankment Height Stage 1 and Stage 2	NA	DWER record A1635160
10	Email correspondence: Wiluna Gold Mine- perizometers	NA	DWER record A1658268

Appendix 3: Tailings Storage facility J



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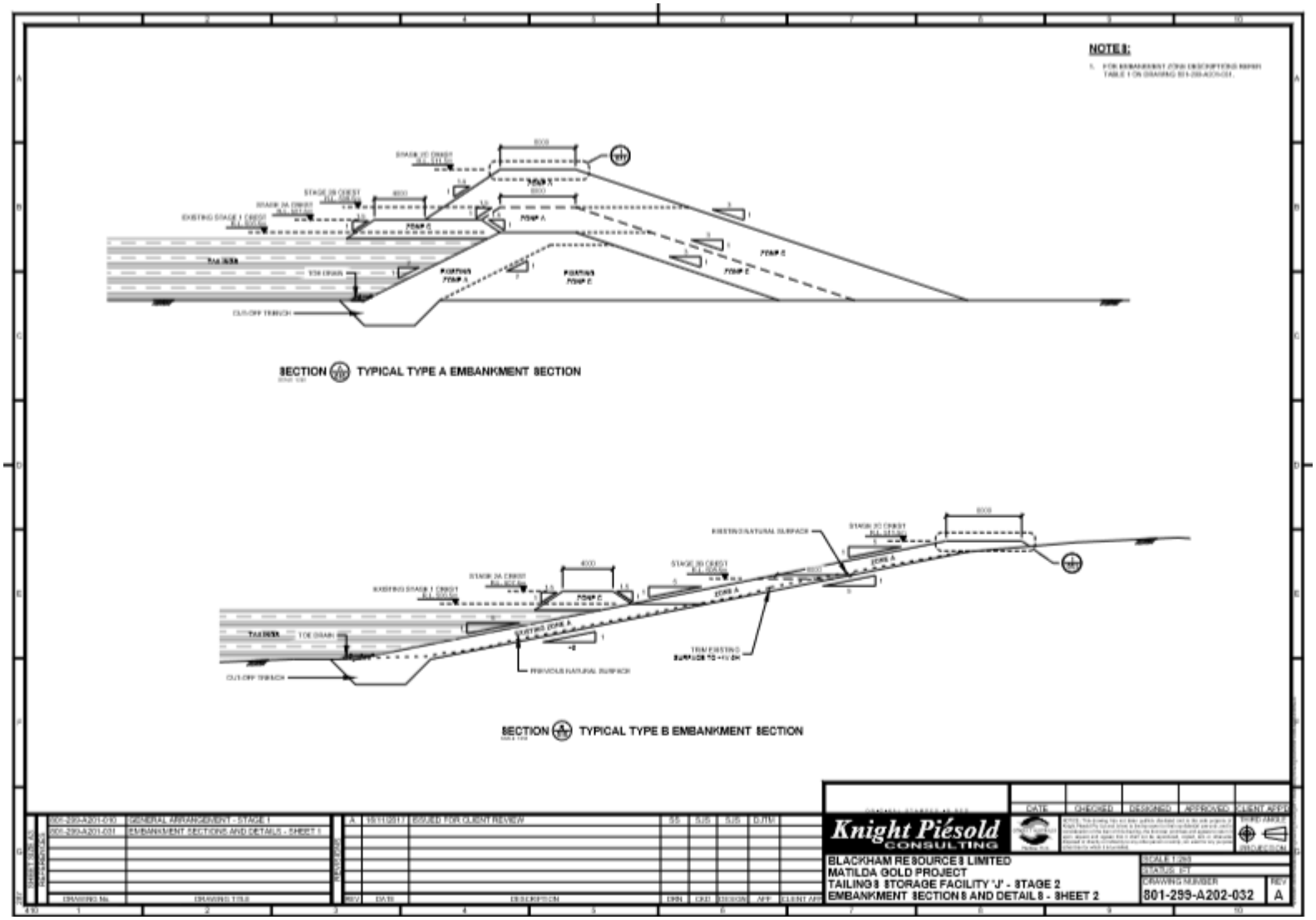
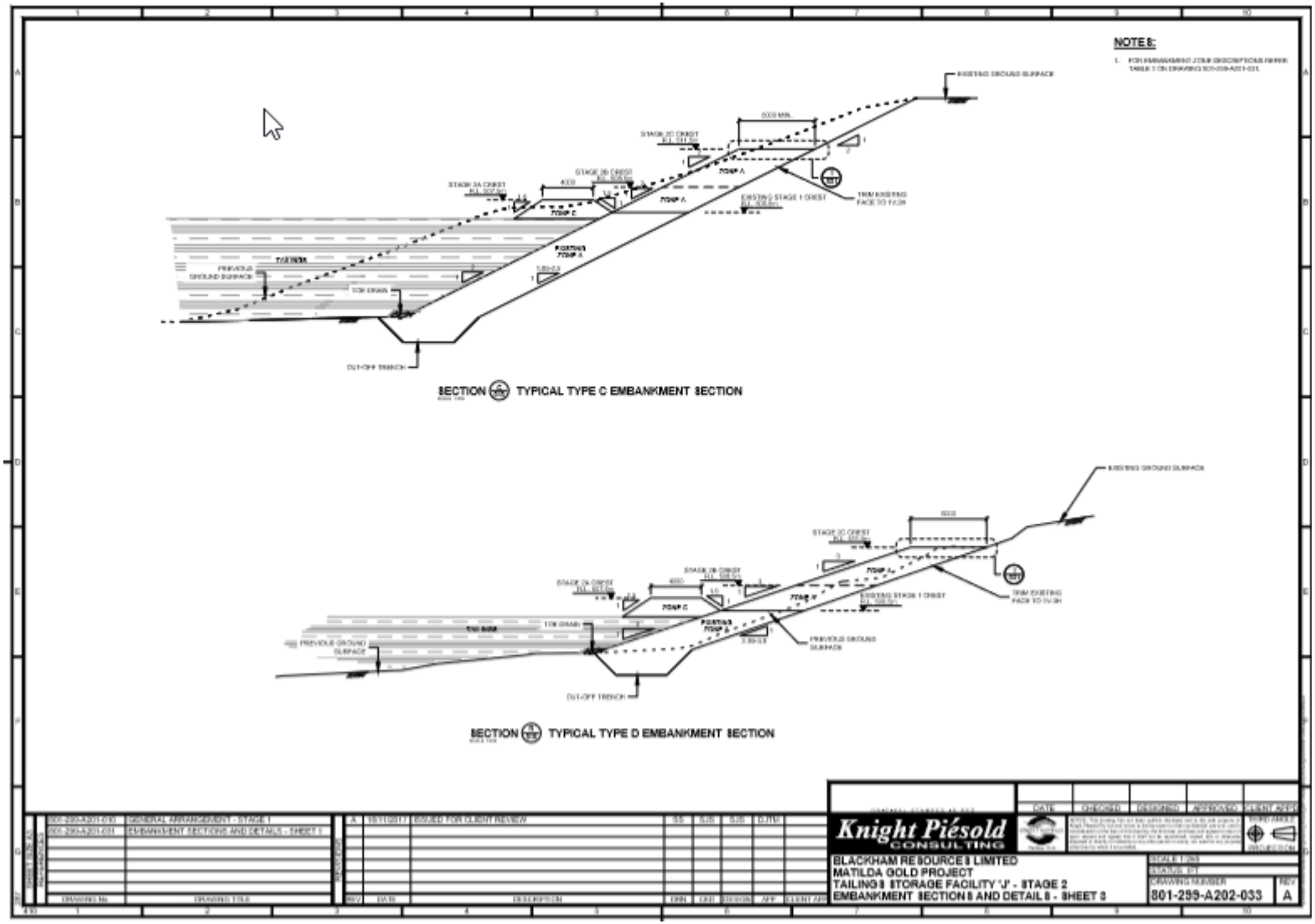
Amendment date: 24 May 2018

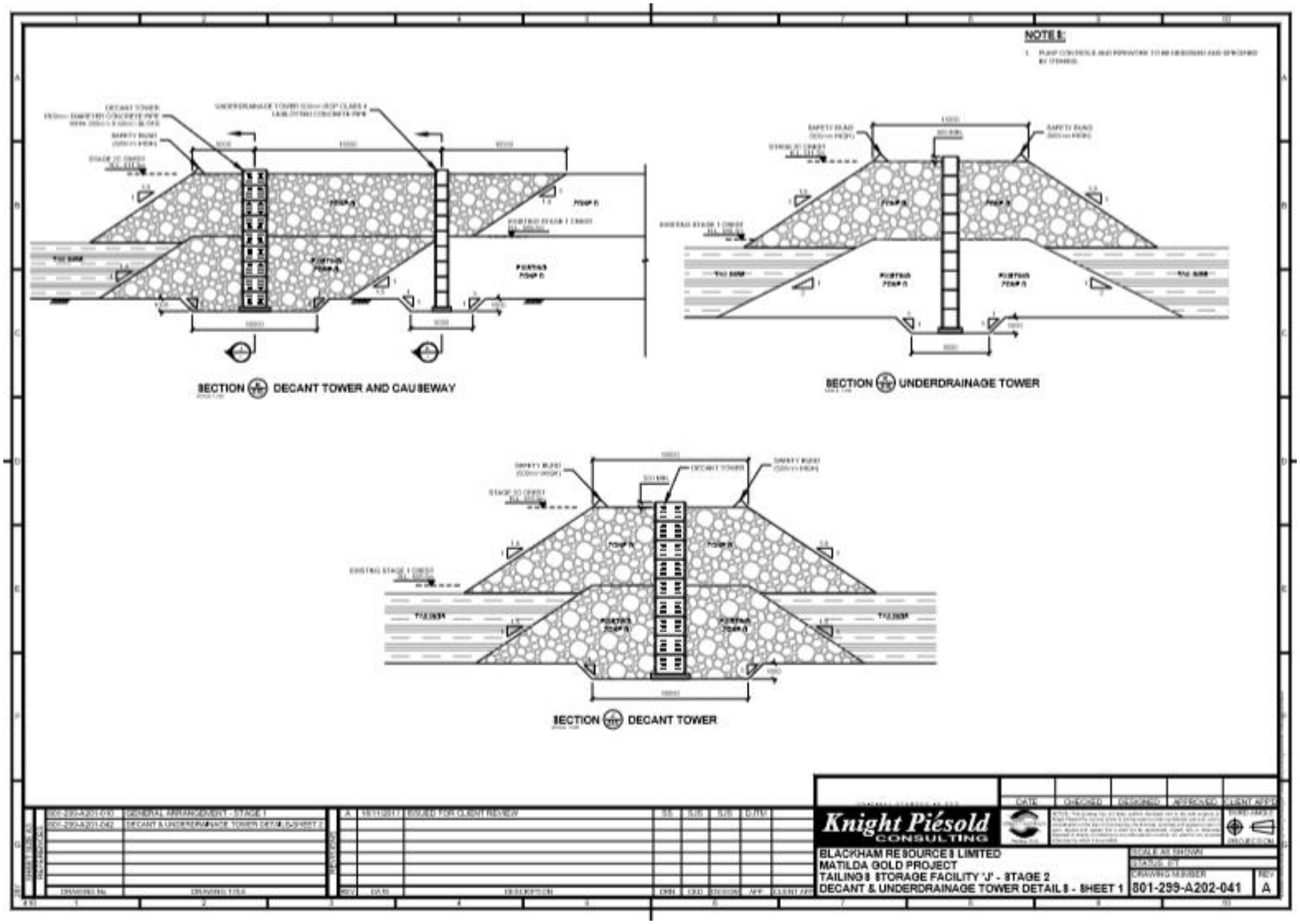
(Source: Blackham, 2018)



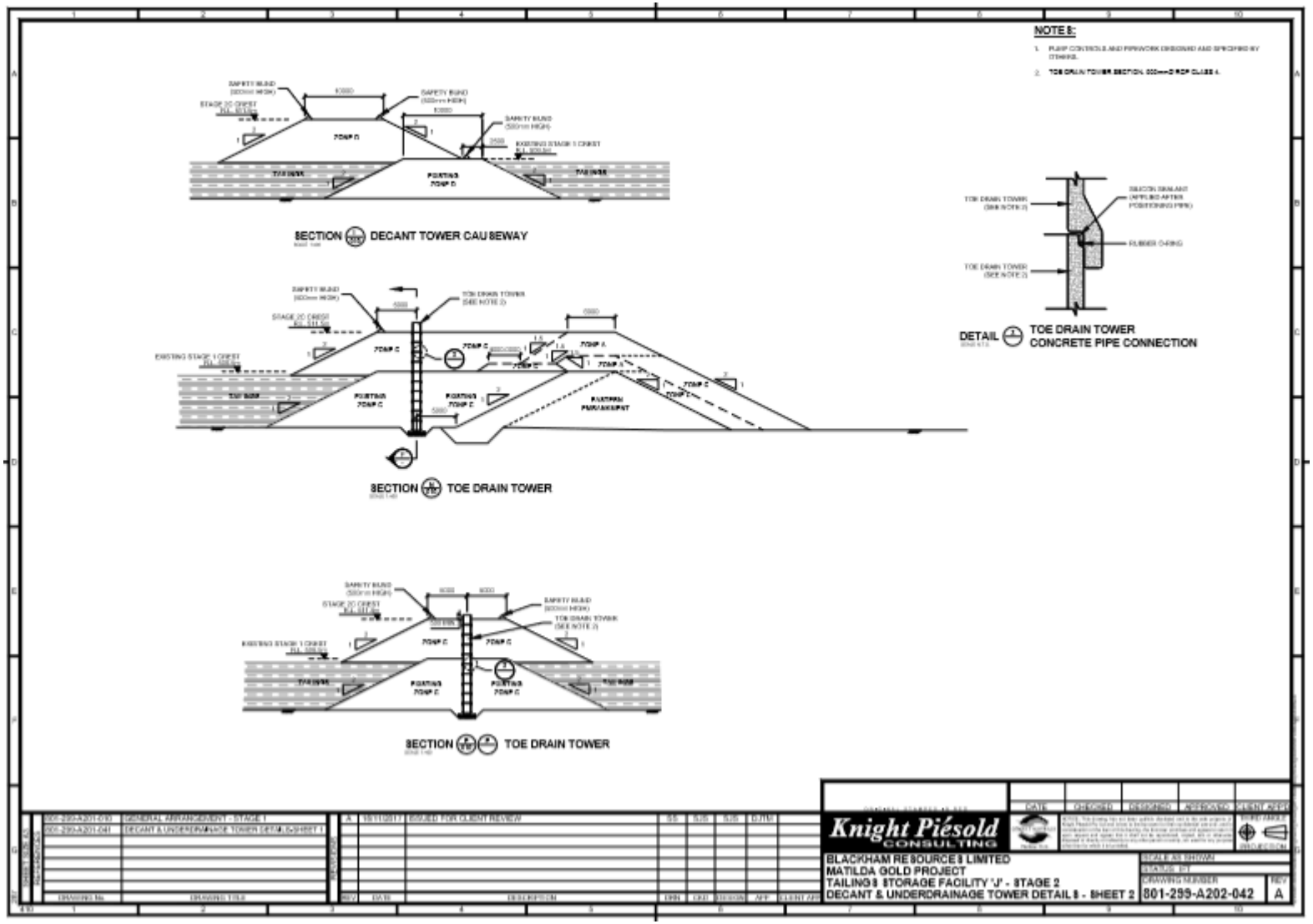
(Source: Blackham, 2018)



(Source: Blackham, 2018)



(Source: Blackham, 2018)



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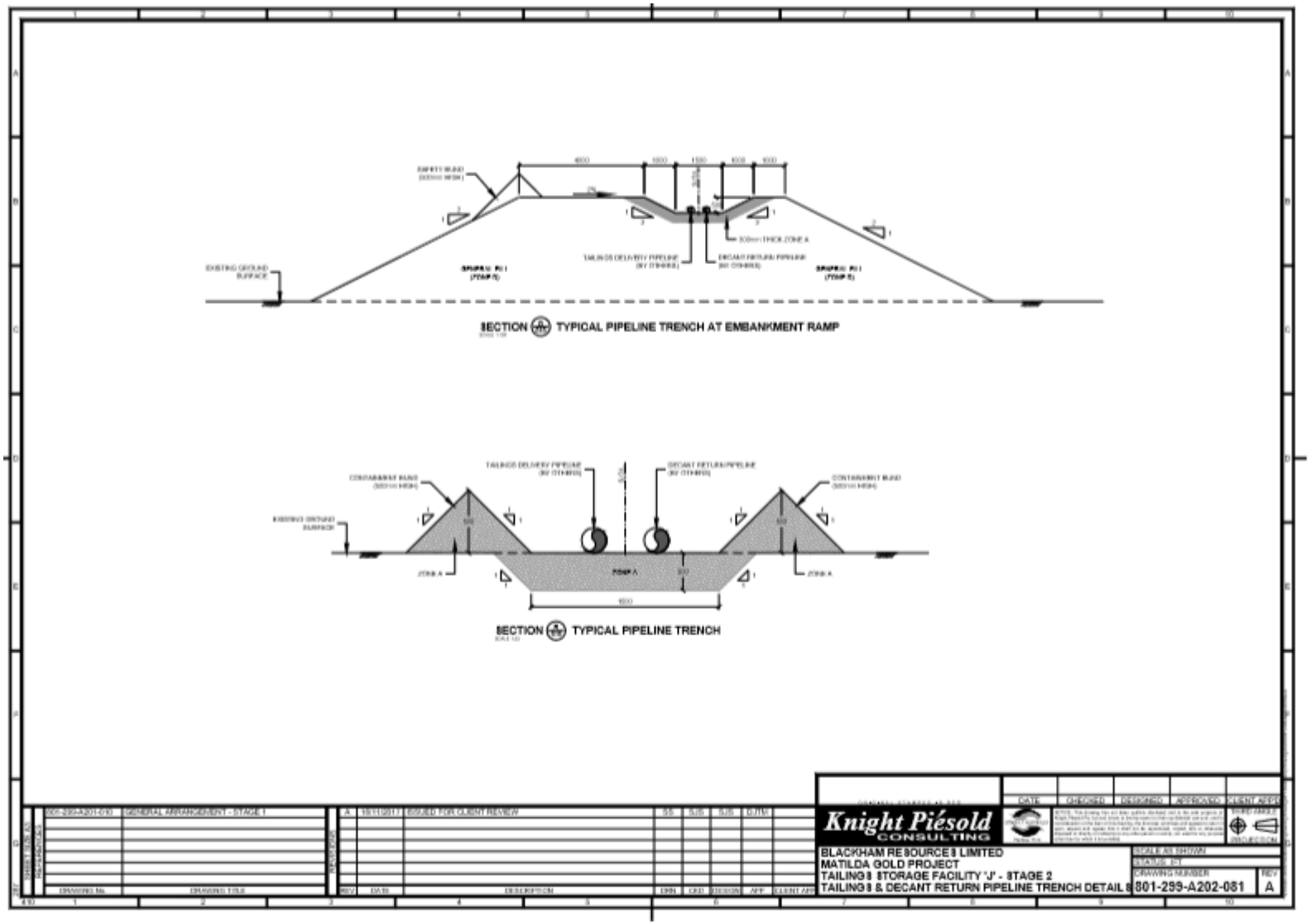

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